Appendix B

Prefinal Inspection Report for the Central Facilities Area-04 Mercury Pond Remedial Action

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Appendix B

Prefinal Inspection Report for the Central Facilities Area-04 Mercury Pond Remedial Action

B-1. PREFINAL INSPECTION CHECKLIST

The completed "Draft Prefinal Inspection Checklist" for the remedial action at the CFA-04 mercury pond is included in Attachment B1.

B-2. DISCUSSION OF FINDINGS

The prefinal inspection occurred on October 16, 2003. A summary of the prefinal inspection is included in Attachment B2. Three action items were identified:

- Provide survey results on area in Zone 6 near Sampling Point 6-3. The Environmental Protection Agency (EPA) did not believe that the excavated area is 10 ft deep or at basalt. The EPA said this is a quality assurance check on how the excavation went.
- E-mail photos to the EPA and the Idaho Department of Environmental Quality (DEQ) that were taken during the inspection.
- Provide a printout of the last calibration of the field Atomic Absorption (AA) instrument.

In conference calls with the Agencies on October 22, 2003, the EPA and DEQ identified the following findings:

- 1. Soil was not removed to the extent practicable at Sampling Point 6-3 (Inspection Checklist Item 4) from on top of the basalt. Soil had been removed from this deep narrow area with a large backhoe that had 10-in. teeth to the extent that the backhoe was capable. The EPA maintained that hand-removal should be used in this area in order to remove the soil to the extent practicable.
- 2. Ten percent of the field samples taken, instead of 10% of the minimum number of samples required, should have been collected and sent to an off-site laboratory for a quality control analysis (Inspection Checklist Item 9). Ten percent of the minimum number of quality control samples required (five samples based on a minimum of 45 samples) had already been collected and sent off-site for analysis. It was agreed that the random collection of samples identified in the *Field Sampling Plan for the Central Facilities Area-04 Pond Remedial Action* (DOE-ID 2003) (Field Sampling Plan) should be performed instead of what is prescribed in the *Quality Assurance Project Plan for Waste Area Groups 1, 2, 3, 4, 5, 6, 7, 10, and Inactive Sites* (DOE-ID 2002) (QAPjP). The QAPjP (DOE-ID 2002) requires collecting three quality control samples that are above the action level. The collection of samples per the QAPjP (DOE-ID 2002) could not be performed since soil from previous screening sampling had been disposed of. In addition, a very small fraction (3 out of 74 samples) of the previous screening samples were above the final remediation goal (FRG) or action level. One quality check sample above the FRG had already been taken.

B-3. CORRECTIVE ACTION

The information in Items 1–3 above was provided to the EPA and DEQ on October 20, 2003 (see Attachment B3). In a conference call on October 22, 2003, the following corrective actions were agreed to:

- 1. Excavate further at Sampling Point 6-3 in Zone 6 with hand methods if necessary. Take pictures of the excavated area before and after the excavation. Collect and analyze a field sample at this location after the additional soil is removed (Inspection Checklist Item 4).
- 2. Collect three more quality control samples at random as specified in the Field Sampling Plan (DOE-ID 2003) with a split analyzed with field instrumentation and the other split sent off-site for analysis (Inspection Checklist Item 9).

The following corrective actions were performed:

- 1. On October 23, 2003, an additional 4 yd³ of soil were excavated from Sampling Point 6-3. On October 27, 2003, three additional samples were collected at random locations (C-6, C-7, C-8) with a split analyzed with field instrumentation and the other split sent off-site for laboratory analysis.
- 2. On October 28, Bechtel BWXT Idaho, LLC (BBWI) decided to remove an additional 35.9 yd³ from Sampling Point 6-3 in order to better expose the basalt (Inspection Checklist Item 3). Pictures were taken before the excavation on October 23 and after this final excavation (see Attachment B4). On October 27, 2003, a field sample was collected at Sample Point 6-3 on top of the basalt and analyzed (52 mg/kg mercury).
- 3. On October 27, 2003, C-8 was resampled in order to get a true 0-6-in. sample instead of a surface sample with a split analyzed with field instrumentation and the other split sent off-site for analysis (Checklist Item 9). See Attachment B1.1 of Attachment B1 for the final analytical results based on field analysis and the recalculated 95% UCL (Inspection Checklist Item 8).

B-4. REFERENCES

DOE-ID, 2002, *Quality Assurance Project Plan for Waste Area Groups 1, 2, 3, 4, 5, 6, 7, 10, and Inactive Sites*, DOE/ID-10587, Rev. 7, September 2002.

DOE-ID, 2003, Field Sampling Plan for the Central Facilities Area-04 Pond Remedial Action, DOE/ID-11024, Rev. 0, February 2003.

B-5. ATTACHMENTS

- Attachment B1 Prefinal Inspection Checklist
 - Attachment B1.1 of Attachment B1 CFA-04 Confirmation Sampling Summary
 - Attachment B1.2 of Attachment B1 INEEL Waste Determination and Disposition Forms
- Attachment B2 Summary of CFA-04 Prefinal Inspection

- Attachment B3 Responses to EPA/DEQ Requests for Information during the Prefinal Inspection
 - Attachment B3.1 Logbook Entry
 - Attachment B3.2 Prefinal Inspection Pictures
 - Attachment B3.3 Field Analyzer Calibration
- Attachment B4 Pictures of Sample Point 6-3 excavation
 - Attachment B4.1 Pictures of Sample Point 6-3 prior to excavation
 - Attachment B4.2 Pictures of Sample Point 6-3 after excavation

Attachment B1 Finalized Prefinal Inspection Checklist

T	Table B1-1. Prefinal inspection checklist				
	Inspection Item	Reference	Satisfactory	Unsatisfactory	Comments
1.	CFA-04 construction site cleared of vegetation if required to mitigate potential fire hazard	Work Plan Section 5.3.4 ^a	X		Done
7	Asbestos-containing material excavated, removed, and disposed of in accordance with the INEEL Waste Acceptance Criteria b	Work Plan Section 5.3.6 ^a	×		Done.
3.	Mercury-contaminated soil with total mercury concentrations above 8.4 mg/kg and TCLP mercury concentrations less than 0.2 mg/L excavated and hauled to the CFA landfill for disposal.	Work Plan Section 5.3.7 a	X		Done.
4.	Low-level mercury-contaminated soil with total mercury concentrations greater than 8.4 mg/kg and TCLP mercury concentrations less than 0.2 mg/L and radionuclide concentrations exceeding the INEEL Waste Acceptance Criteria ^b excavated and hauled to the ICDF for disposal.	Work Plan Section 5.3.7 ^a	×		Done. The final additional soil was satisfactorily excavated at Sampling Point 6-3 per a prefinal inspection finding on 10-16-03.
ς.	Low-level TCLP mercury-contaminated soil with total mercury concentrations greater than 8.4 mg/kg and TCLP concentrations greater than 0.2 mg/L excavated and hauled to the ICDF for disposal at the ICDF.	Work Plan Section 5.3.7 a	×		Done.
9.	Calcine-filled bottles that exceed 260 mg/kg and 0.2 mg/L TCLP mercury packaged and shipped offsite for treatment and disposal.	Work Plan Section 5.3.7 a	NA	NA	Not applicable
7.	Field Samples collected and analyzed to direct excavation and to be used for confirmation sampling	Field Sampling Plan Section 4.2.2°	X		Done. See Attachment B1.1 for individual field sampling results – includes field analytical results of quality control samples (C-1 through C-8) with samples C-5 through C-8 added per a pre-final inspection finding on 10-16-03.
∞.	95% UCL calculated using field sampling data and compared to the final remediation goal	Field Sampling Plan 3.1.7.1°	X		Done. See Attachment B1.1 – includes field analytical results of quality control samples (C-1 through C-8) with samples C-5 through C-8 added per a pre-final inspection finding on 10-16-03.
9.	Quality control samples collected and analyzed at an off-site laboratory	Field Sampling Plan Section 4.2.2 °	X		Done. Samples sent to laboratory – three additional samples were satisfactorily taken per a prefinal inspection finding on 10-16-03
10.	 Off-site laboratory analytical data received, validated and entered into ERIS. 	Field Sampling Plan ^c	X		Done. See Appendix C for sampling results.
11.	Validated analytical data transmitted to DOE Idaho, DEQ, and EPA	FFA/CO ^d	X		Done. See letter ICDF-05-04 CCN #47752, dated 02-03-04.

Table B1-1. (continued).

Inspection Item	Reference	Satisfactory	Unsatisfactory	Comments
d characterized rical analytical data, I during the course	Work Plan Appendix E^{a}	×		Done. See attached INEEL Waste Determination & Disposition Forms (Attachment B1.2)
13. Fence removed	Work Plan Section 5.3.3 a	X		Done.
14. Excavation backfilled to excavation grade and contour smoothed.	Work Plan Section 5.3.11 Appendix B Section 02200-Earthwork a	×		Done. See photographic record, Appendix D.
15. Reclamation seeding with wood chip mulch performed in all disturbed areas.	Work Plan Section 5.3.11 Appendix B Section 02486- Revegetation ^a	X		Done. See photographic record, Appendix D.
16. Certified seed mix used in reclamation seeding.	Work Plan Appendix B Section 01005-Summary of Work, Vendor Data Schedule ^a	X		Done.
 Soil analyzed to determine appropriate fertilizer mix and applicable fertilizer applied. 	Work Plan Appendix B Section 01005-Summary of Work, Vendor Data Schedule ^a	X		Done.
18. Equipment decontaminated and contaminated materials properly stored and disposed of.	Work Plan Appendix B Section 02200- Earthwork ^a	×		Done.
19. Equipment removed from the site. Decontamination pads and temporary barriers and signs removed and dispositioned appropriately.	Work Plan Section 5.3.12 ^a	X		Done.
20. Topographical survey completed	Work Plan Appendix B Section 01005-Summary of Work, 01051-Construction Surveying and Staking, Vendor Data Schedule ^a	X		Done. See Appendix G.
21. As-built drawings depicting final construction completed.	Work Plan Appendix B Section 01005-Summary of Work, Vendor Data Schedule ^a	×		Done. See Appendix G.

Table B1-1. (continued).

Inspection Item	Reference	Satisfactory	Unsatisfactory	Comments
a. DOE-ID, 2003, Waste Area Group 4 Remedial Design/Remedial Action Work Plan, CFA-04 Pond Mercury-Contaminated Soils, Operable Unit b. DOE-ID, 2003, Idaho National Engineering and Environmental Laboratory Waste Acceptance Criteria, DOE/ID-01-10381, Rev. 18, May 2003.	n/Remedial Action Work Plan, CF. ironmental Laboratory Waste Acce	1-04 Pond Mercury- ptance Criteria, DO	Contaminated Soils, O	DOE-ID, 2003, Waste Area Group 4 Remedial Design/Remedial Action Work Plan, CFA-04 Pond Mercury-Contaminated Soils, Operable Unit 4-13, DOE/ID-11028, Rev. 0, February 2003. DOE-ID, 2003, Idaho National Engineering and Environmental Laboratory Waste Acceptance Criteria, DOE/ID-01-10381, Rev. 18, May 2003.
c. DOE-ID, 2003, Field Sampling Plan for the Central Facilities Area-04 Pond Remedial Action, DOE/ID-11024, Rev. 0, February 2003.	Facilities Area-04 Pond Remedial	Action, DOE/ID-110	24, Rev. 0, February 2	003.
d. DOE-ID, 1991, Federal Facility Agreement and Con.	sent Order for the Idaho National 1	Ingineering Laborat	tory, Administrative Do	DOE-ID, 1991, Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory. Administrative Docket No. 1088-06-29-120, U.S. Department of Energy
Idaho Field Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.	gency, Region 10; Idaho Departme	nt of Health and We	lfare, December 4, 199	
A confession of the contract o				
CFA - Cellual Facillues Alea				
DEQ = Idaho Department of Environmental Quality				
EPA = Environmental Protection Agency				
ERIS = Environmental Restoration Information System				
ICDF = INEEL CERCLA Disposal Facility				
INEEL = Idaho National Engineering and Environmental Laboratory	aboratory			
TCLP = toxicity characteristic leaching procedure				
UCL = upper confidence limit				

Attachment B1.1 CFA-04 Confirmation Sampling Summary

B1.1 CFA-04 CONFIRMATION SAMPLING SUMMARY

Field samples were collected during the remedial activities at the CFA-04 mercury pond. The field samples were collected at random locations at a depth ranging from 0 to 6 in.. The samples were analyzed for total mercury on-Site using an atomic absorption spectrometer. After collection and analysis, the 95% upper confidence level on the mean was calculated, and the data were tested for normality. Normality was established through use of the Shapiro-Wilk (SW) statistic and its associated p-value for the non-transformed transformed data using two methods: 1) natural logarithm transform, and 2) square root transform. Because the natural log and square root cannot handle negative values, 0.11 was added to every data point. This does not change the testing of normality. The data set with the highest S-W statistic and lowest p-value was then selected as the data set for further analysis. While they do not achieve strict normality, there is a marked improvement when using the natural log transformation. The slight departure from normality has little effect on the analysis results. The S-W statistics and p-values are in the attached spreadsheets (Tables B1.1-1 and B1.1-2).

The results of the statistical analyses are that the 95% UCL for the "with pipe" data is 0.425 and for the "without pipe" data is 0.377. The transformed value of the final remediation goal is In(8.4+0.11) = 2.14. Therefore, at a 95% confidence level, it can be concluded that the average mercury contamination "with" or "without" the pipe is less than the final remediation goal.

Table B1.1-1. Mercury data without sample from under pipe.

Location	conc	conc+.11	ln(conc+.11)	sqrt(conc+.11)
ZONE 11-13	5.24	5.35	1.677	2.313
ZONE 11-14	6.10	6.21	1.826	2.492
ZONE 11-15	0.14	0.25	-1.382	0.501
ZONE 11-16	0.61	0.72	-0.326	0.850
ZONE 11-17	5.49	5.60	1.723	2.366
ZONE 11-18	8.03	8.14	2.097	2.853
ZONE 11-19	0.19	0.30	-1.201	0.549
ZONE 11-20	1.86	1.97	0.678	1.404
ZONE 12-1	30.00	30.11	3.405	5.487
ZONE 12-2	0.48	0.59	-0.531	0.767
ZONE 12-3	7.99	8.10	2.092	2.846
ZONE 12-4	8.15	8.26	2.111	2.874
ZONE 12-5	5.82	5.93	1.780	2.435
ZONE 12-6	2.76	2.87	1.054	1.694
ZONE 13-1	0.30	0.41	-0.892	0.640
ZONE 13-2	1.18	1.29	0.255	1.136
ZONE 13-3	4.07	4.18	1.430	2.045
ZONE 13-4	0.85	0.96	-0.046	0.977
ZONE 13-5	4.92	5.03	1.615	2.243
ZONE 13-6	2.10	2.21	0.793	1.487
ZONE 13-7	2.95	3.06	1.118	1.749

	SW statistic	p-value
conc+.11	0.44271	< 0.00001
ln(conc+.11)	0.95091	0.00483
sqrt(conc.+.11)	0.80723	< 0.00001

mean for ln(conc+.11)	0.016
std for ln(conc+.11)	1.924
ucl95 for ln(conc+.11)	0.377

Table B1.1-1. (continued).

Table B1.1-1.				
Location		conc+.11		sqrt(conc+.11)
ZONE 14-1	4.21	4.32	1.463	2.078
ZONE 14-10	0.12	0.23	-1.492	0.474
ZONE 14-11	6.60	6.71	1.904	2.590
ZONE 14-2	2.82	2.93	1.075	1.712
ZONE 14-3	2.96	3.07	1.122	1.752
ZONE 14-9	0.25	0.36	-1.036	0.596
ZONE 2-1	0.20	0.31	-1.171	0.557
ZONE 2-10	-0.10	0.01	-4.605	0.100
ZONE 2-11	1.90	2.01	0.698	1.418
ZONE 2-12	0.60	0.71	-0.342	0.843
ZONE 2-13	4.00	4.11	1.413	2.027
ZONE 2-14	0.00	0.11	-2.207	0.332
ZONE 2-15	0.60	0.71	-0.342	0.843
ZONE 2-16	0.00	0.11	-2.207	0.332
ZONE 2-17	-0.10	0.01	-4.605	0.100
ZONE 2-18	-0.10	0.01	-4.605	0.100
ZONE 2-19	0.20	0.31	-1.171	0.557
ZONE 2-2	0.00	0.11	-2.207	0.332
ZONE 2-20	0.10	0.21	-1.561	0.458
ZONE 2-21	0.50	0.61	-0.494	0.781
ZONE 2-22	4.90	5.01	1.611	2.238
ZONE 2-23	2.90	3.01	1.102	1.735
ZONE 2-3	0.00	0.11	-2.207	0.332
ZONE 2-4	1.80	1.91	0.647	1.382
ZONE 2-5	-0.10	0.01	-4.605	0.100
ZONE 2-6	0.00	0.11	-2.207	0.332
ZONE 2-7	-0.10	0.01	-4.605	0.100
ZONE 2-8	0.10	0.21	-1.561	0.458
ZONE 2-9	4.80	4.91	1.591	2.216
ZONE 5-1	0.7	0.81	-0.211	0.900
ZONE 5-2	4.8	4.91	1.591	2.216
ZONE 5-3	1.1	1.21	0.191	1.100
ZONE 5-4	16	16.11	2.779	4.014
ZONE 5-5	0.7	0.81	-0.211	0.900
ZONE 5-6	3.1	3.21	1.166	1.792
ZONE 5-7	0.6	0.71	-0.342	0.843
ZONE 6-1	0.7	0.81	-0.211	0.900
ZONE 6-2	1.9	2.01	0.698	1.418
ZONE 6-4	7.2	7.31	1.989	2.704
ZONE 7-11	0.1	0.21	-1.561	0.458
ZONE 7-12	0.5	0.61	-0.494	0.781
LOND /-12	0.5	0.01	U.⊤/⊤	0.701

Table B1.1-1. (continued).

	,			
Location	conc	conc+.11	ln(conc+.11)	sqrt(conc+.11)
ZONE 7-13	0	0.11	-2.207	0.332
ZONE 7-14	0.1	0.21	-1.561	0.458
ZONE 8-13	1.5	1.61	0.476	1.269
ZONE 8-14	1.8	1.91	0.647	1.382
ZONE 8-18	1.6	1.71	0.536	1.308
ZONE 8-19	2.3	2.41	0.880	1.552
ZONE 8-20	6.7	6.81	1.918	2.610
C-1	0.1	0.21	-1.561	0.458
C-2	0.1	0.21	-1.561	0.458
C-3	1.6	1.71	0.536	1.308
C-4	7.1	7.21	1.975	2.685
C-5	25.5	25.61	3.243	5.061
C-6	0.1	0.21	-1.561	0.458
C-7	3.7	3.81	1.338	1.952
C-8	60	60.11	4.096	7.753

Item 11 of EPA Comments



Department of Energy

Idaho Operations Office 1955 Fremont Avenue Idaho Falls, Idaho 83401-1563

February 23, 2004

Mr. Nicholas Ceto, INEEL Project Manager U.S. Environmental Protection Agency Region X 712 Swift Blvd., Suite 5 Richland, WA 99352

Mr. Daryl F. Koch, Acting Remediation Manager Waste Management and Remediation Division Idaho Department of Environmental Quality 1410 North Hilton Boise, Idaho 83706-1255

SUBJECT: TRANSMITTAL OF LIMITATIONS AND VALIDATION REPORT FOR INORGANIC AND MISCELLANEOUS CLASSICAL ANALYSIS OF SAMPLES COLLECTED IN SUPPORT OF THE WASTE AREA GROUP (WAG) 4, CENTRAL FACILITIES AREA-04 REMEDIAL ACTION CONFIRMATION SAMPLING (EM-ER-04-041)

Dear Mr. Ceto & Mr. Koch:

Copies of the limitations and validation (L&V) reports for the Central Facilities Area (CFA)-04 pond remedial action, conducted in 2003 at the Idaho National Engineering and Environmental Laboratory, are enclosed in accordance with Section 19.1 of the FFA/CO.

The reports cover the analyses of surface soil samples collected upon conclusion of excavation activities at the WAG 4, CFA-04 pond remedial action site. Surface soil samples 0 to 15 cm (0 to 6 in) were collected from eight randomly selected locations, based on a 7.6×7.6 -m (25 \times 25-ft) grid that was established over the CFA-04 area.

Included in this L&V transmittal are two reports for total mercury. Each of these data packages was validated to analytical method data validation level "B." No technical validation discrepancies were noted in the data package for SDG #4R400601HG; however; all analytical results in the data package for SDG #4R400101HG were qualified with an "R" validation flag due to poor laboratory duplicate sample results for mercury (52.5%). These results were outside the ±35% relative percent difference requirements outlined by technical proceedure-132.

As noted in the L&V report and cover letter, the primary reason for the "R" validation flag was due to the poor laboratory duplicate sample results, which are likely attributed to the

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heterogeneity of the sample selected for this quality control measurement. Had the laboratory selected another sample, the outcome of the validation qualification could have been different. Despite the validation flag, all data are deemed usable.

If you have any questions or need further information please contact me at 208-526-4049.

Sincerely.

Carol A. Hathaway

Environmental Protection Specialist Environmental Restoration Program

Carol a Hathaway

Cc/enc:

K. Ivy, US EPA, Seattle, WA; 2 copies

C. Cody, IDHW DEQ; 2 copies

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EXTERNAL bcc DISTRIBUTION:

R. Simonds, MS 3940 IR, BBWI, MS 3940

ID DISTRIBUTION:

K. Hain (EM/ER), MS 1222, w/o enc. (y) C. Hathaway (EM/ER), MS 1222, w/enc (w)

RECORD NOTES:

- 1. This letter was written to transmit Limitations And Validation Report For Inorganic And Miscellaneous Classical Analysis Of Samples Collected In Support Of The Waste Area Group (Wag) 4, Central Facilities Area-04 Remedial Action Confirmation Sampling For Operable Unit 4-13 to the Agencies.
- 2. C. Hathaway (EM/ER) wrote and signed this letter
- 3. This letter closes CATS number N/A.
- 4. The attached correspondence has no relation to the Naval Nuclear Propulsion Program. Naval Reactors concurrence is not required.

Attachment B1.2 INEEL Waste Determination and Disposition Forms

Attachment B1.2

WORKING COPY
ONLY Profile Number: 38098 INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF) General Instructions: 03/03/2000 Rev. 04

Non-hazardous Soils from CFA-04 Pond

WDDF Number (Optional):

Waste Stream Name:

Waste Stream Contacts

Pg 1 57-4.

4142 8101 Š ☐ Yes ☒ No ☐ NA ☐ Yes ☑ No ☐ NA ☐ Yes ☑ No ☐ NA ☐ Yes ☒ No ☐ NA ☐ Yes 図 No ☐ NA Soils generated from the remediation of CFA-04 pond. Mercury is the contaminant of concern for this area. These soils are from zones 11, 12, 13 and 14. Sampling of these soils gave a total mercury concentration of up to 77.1 mg/kg. Subsequent sampling for TCLP mercury did not exceed 50 ug/L. Therefore, these zones would not be considered hazardous for mercury. Radioisotopes are present at the normal INEEL background level and fall within the parameters defined in TPR-713. Secondary Multi-Layered 8. Waste Characteristics: Note: The waste characteristics may not be known at time of initial determination. If required for treatment or characterization, those parameters will be identified at a later date. Pager 9049 5095 Phone 6-3524 6-1562 Type/size: One Time Only On-going Gas Cylinder n. PCBs: If Yes, provide concentrations marchamy CBs Bulk Product? (40 CFR 761.62)? (actual & source) in composition table. E-Mail leecd p. Cyanide ≥ 250 mg/kg o. Sulfide > 500 mg/kg Aerosol u. Halogens (Cl, F, Br) Treatment Residue SECTION I: PROCESS KNOWLEDGE EVALUATION (Completed by the generator with assistance from the Facility Representative) If applicable: Container #: Radioactive s. Explosive Mark V. Marchant Oxidizer Charlyss D. Lee □ Sludge 3. Were any waste minimization activities a part of this process: 🛛 Yes 📋 No. (If Yes, provide description or reference.) Name No NA NA NA NA ☐ Yes ☒ No ☐ NA ☐ Yes ☒ No ☐ NA No □ NA ☐ Yes ☑ No ☐ NA ☐ Yes ☐ No ☑ NA ☐ Yes ☒ No ☐ NA Solid Organic Liquid Aqueous Liquid Technical Specialist: Sources used for process evaluation (e.g. MSDS, operational logs, procedures, analyses): analytical data Area: WAG-4 Independent ☐ Yes ☐ Yes Contact: Solids (≥ 50% by visual inspection) or non-RCRA Rubble Pyrophoric (Water Reactive) k. Free liquids: If Yes, quantity 3950 4142 S m. Pyrophoric (Air Reactive) ☐ Routine operations volume % I. RCRA Debris (>60 mm) 6403 Phone Pager 6-9989 7699 h. Asbestos: If yes, is it friable? Flammable Solid Building/Room: NA Process and Waste Description: (Attachment Included: 🗌 Yes 🛛 No) 8008-9 E-Mail wigg 7 ¥ ⊠ Total suspended solids <1% ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No 図 NA ☐ Yes ☐ No 図 NA ☐ Existing 6. Physical Description (check all that apply): Color: 1. Waste Generation Location: Facility: CFA Exact NA Method: Sitewide waste minimization plan Anticipated Deborah W. Wagoner Other generation information: N/A Liquids Facility Rep.: |Robert A. Lopez d. Is total organic carbon <1% Furning Acid/Acid Gases Pyrophoric (Air Reactive) Generation Status: Name g. Water Reactive Flash Point: Generator: Contact:

435.39

I certify that the information in Section I of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the informatio Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified. The WGS Facility Representative, based on information provided, has assigned a probable waste type in Section II. 4/24(2003 Date 4/24/2003 SECTION II: PROBABLE WASTE TYPE: (Completed by the Facility Representative and used to assign waste technical specialist and for appropriate management until linal waste Used Oil ONL Material Profile Number: 3809 Q Fg 294 Comments ☐ Other – Describe: INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

WORKING COPY Used as a Solvent? ☐ Recyclable: ☐ Non Radioactive Lead (>99+ % Lead) ☐ Lead Batteries ☐ Silver ☐ RCRA Scrap metal ☐ Other - Describe: Conditional Industrial
 TSCA □ Other z 10. Radioisotopes: Are radioisotopes present? 🗌 Yes, If Yes, refer to attachment 🛭 No, If No, include signed form 435.02 | Range | | Range | | Constituent is <1%, use mg/kg or mg/L | | Otherwise report in %) Units % 100 ٥ Based on evaluation of the process and available data the waste type indicated is (check all that apply): CERTIFICATION ☐ Non-conditional Industrial From 100 ☐ Radioactive Only 9. Waste Composition: (Must total 100%). Attachment Included:

Yes

No

No Analysis or PK ¥. Non-hazardous Soils from CFA-04 Pond CAS No. Robert A. Lopez WGS Facility Representative Name Typed/Printed ☐ Lab Pack ☐ Mixed Deborah W. Wagoner Generator Name Typed/Printed Constituent Indicated Waste Codes: None Waste Stream Name: Material Exchange ☐ Hazardous Only 03/03/2000 Rev. 04 Soil

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

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Is the information provided adequate for complete waste determination, management, transportation, treatment, and disposal of waste? 🔯 Yes 📋 No 1f No, identify additional Attachment Included: 🔲 Yes 🛛 No 6. Is waste characteristic per Subpart C of 40 CFR 2812 S Yes S No (If Yes, provide waste codes, regulatory subcategory, and an explanation of determination.) Attachment Included: S No Codes: 4. Is waste subject to 40 CFR 268 regulations? ☐ Yes ☒ No If Yes, is the waste a: ☐ Waste Water or ☐ Non Wastewater.
Is there a specified method of treatment? ☐ Yes ☒ No If Yes, list the specified method:
5. Is waste listed in Subpart D of 40 CFR 261? ☐ Yes ☒ No (If Yes, provide waste codes, regulated hazardous constituent(s), and an explanation of determination.)
Attachment Included: ☐ Yes ☒ No Codes: \boxtimes STP 1D (mixed only): Immediately Prior to Shipment; 🔲 Yes 7. If hazardous, is the waste excluded for recycling in accordance with 40 CFR 261.2(e)(1)? 📋 Yes 📋 No If Yes, regulatory Citation: NA 1. Will verification be performed on this waste? 🛛 Yes 📋 No. If Yes, describe the verification to be performed. One time only, SECTION III WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist) Does the waste require evaluation in accordance with 40 CFR 268.48? Yes 🗵 No (If Yes, identify UHCs.) UHCs: 2. Will this waste be treated in a <90 storage area?

Yes No (If Yes, attach plan.) (Mixed and Hazardous Only) 9. Is waste TSCA regulated for either of the following? PCBs:

Ves

No Asbestos:

Yes

No 8. Is the waste mixed or low level?

Ves
No (If Yes, include attachment with isotopic information.) 3. Is waste excluded from regulation under 40 CFR 261.4? Tes No If Yes, Regulatory citation: 1. Is this a solid waste (per 40 CFR 261.2)? 🛭 Yes 🗋 No (If No, attach regulatory citation) C. Disposition and Data Gap Evaluation: (Attachment Included:

Yes

No) 1. Proposed Disposition (storage, treatment, disposal pathway): CFA Landfill D. Verification requirements: (Attachments Included:

Ves

No) 2 | 2. Is this a Hazardous Waste (per 40 CFR 261.3)? Tyes No B. Evaluation of Underlying Hazardous Constituents (UHCs) ×es ×es At Initial Storage Location; 2. What is the verification frequency? NA information or analysis required. A. Waste Determination

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

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			WORKI	WORKING COPY	3809 €	
E. Packaging and Transportation Requirements ((to be complete	uirements (to be completed by P&T): Complete this section only if wastes and be transported	tion only if wastes a	by transported.		
Hazardous]Yes ⊠ No	If Yes: DOT Primary Hazard:	ö	DOT Subsidiary Hazard:	azard:	T
2. Recommended Packaging:						T
3. Probable Basic Description (PSN, Hazard Class, DOT ID #. PG):	OOT ID #. PG):					Ţ
4. Other information (special shipping conditions, etc.):	:(:					Т
5. If containers are already generated, are they packaged correctly for the DOT hazard class? Yes	aged correctly fo	or the DOT hazard class?	. ☐ No If No, list container required	ntainer required.		Τ
:]
Packaging & Transportation Name Typed/Printed			Packaging & Transportation Signature	sportation e	Date	1
Summary of Waste Determination: Hazardous	Hazardous (see codes [a above]	Mixed Low-Level (see codes listed above)	listed Low-Level	Conditional Industrial	Other (describe)	
		CERTIFICATIONS				
I certify that the information in Section III of this form and the applicable attachments are fully disclosed and accurate. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified.	and the applicat been made, and	ble attachments are fully disclose d all known and suspected hazar	ed and accurate. A goods have, to the best of	od faith effort has been pu i my knowledge, been ider	ut forward to acquire and verify the ntified.	4.
Charlyss D. Lee		Marlus 16.	(). H.			
WGS Technical Specialist Name Typed/Printed			WGS Technical Specialist Signature	Specialist e	Date	1
Mark V. Marchant		W.	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		5-5-63	
WGS Independent Reviewer Name Typed/Printed			WGS Independent Reviewer Signature	ıt Reviewer re	Date	ŀ
Low Level Waste Hazardous Waste Determination Review Name Typed/Printed	Review Name	row Lev	vel Waste Hazardous Waste Signature	Low Level Waste Hazardous Waste Determination Review Signature	Date	
Additional Narrative Information (As Needed):	nonation	Rate is delined as	" One - tu	me-bule,	Laurener will	
require numerous bulk dump truck loods this & Londfill over a several west	Gump t	med loads	trys to de	ndfil over	a several week	_1
Mary Comments	Xupr.	2/1/2				
ω	sp inch	to include Zone 214 after analytical data	the analyt		received.	
					75/63	

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF) WORKING COPY ONLY

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General Instructions:

MLLW Soils from CFA-04 Pond Waste Stream Name:

WDDF Number (Optional):

Material Profile Number: 3747Q

Charge #:_

Waste Stream Contacts	n Contacts										
Contact:	Name	ш	E-Mail Pho	Phone Pager	SMS	Contact:	Name	E-Mail	Phone	Pager	MS
Generator:	Deborah W. Wagoner		wigg 6-99	6-9989 7699	3950	Technical Specialist; (Charlyss D. Lee	poeel	6-9983	↓	4142
Facility Rep.:	Facility Rep.: Robert A. Lopez		rlz 6-80	6-8008 6403	4142	Independent Reviewer:	Mark V. Marchant	marchamv	6-1562	5095	8101
SECTION I: F	SECTION I: PROCESS KNOWLEDGE		Completed I	y the gene	rator with a	EVALUATION (Completed by the generator with assistance from the Facility Representative)	ility Representative)				
1. Waste Gen	I. Waste Generation Location: Facility:	Facility: CFA E	Building/Room: N/A	m: N/A	A	Area: WAG-4 If app	If applicable: Container #:	Ty	Type/size:		
2. Process and Soils level	s and Waste Description: (Attac Soils generated from the remedi level of 0.2 mg/L. The soils also	2. Process and Waste Description: (Attachment Included: ☐ Yes ☒ No) Soils generated from the remediation of CFA-04 pond. These soil level of 0.2 mg/L. The soils also contain trace amounts of radionu	d: 🖰 Yes 4 pond. The amounts of r	⊠ No} se soils are adionuclide	s rendering	chment included: [] Yes No) alion of CFA-04 pond. These soils are from zones 6a and 7a. These sc contain trace amounts of radionuclides rendering the soils as MLLW.	s and Waste Description: (Attachment Included: 🗋 Yes 🗵 No) Solls generated from the remediation of CFA-04 pond. These soils are from zones 6a and 7a. These soils exceed the final remediation goal of 8.4 mg/kg and exceed the tclp level of 0.2 mg/L. The soils also contain trace amounts of radionuclides rendering the soils as MLLW.	goal of 8.4 mg	kg and ex	ceed the	tclp
3. Were any w Sitew	 Were any waste minimization activities Sitewide waste minimization plan 	activities a part of this process; X Yes ation plan	rocess: 🕅	1	d (say ll) o	☐ No (If Yes, provide description or reference.)	ference.)				
4. Generation Status:	Status: X Anticipated	ipated Existing		Routine operations	ations		n Activities 🛛 One Time Only	Only On-going		Secondary	Jary
5. Other gener	5. Other generation information: N/A	N/A						7,7,1			
6. Physical De	6. Physical Description (check all that app	I that apply): Color:	Solid Solid	O D	Organic Liquid	id	Sludge Aerosol	☐ Gas Cylinder		Multi-Layered	٦
7. Sources ust	ed for process eval	 Sources used for process evaluation (e.g. MSDS, operational logs, procedures, analyses): analytical 	rational logs	, procedure	ss, analyse	s): analytical					
8. Waste Characteristics dentified at a later date	acteristics: Note: ater date.	The waste characteristic	cs may not t	e known at	time of ini	ial determination. If re	8. Waste Characteristics: Note: The waste characteristics may not be known at time of initial determination. If required for treatment or characterization, those parameters will be sentified at a later date.	rization, those p	arameter	s will be	
	Liquids				Solids	6		W			
a. pH (aqueous only):	s only): 12.5	Method:	h. Asbestos: If ves, is it friable?	os: friable?		Ves No	NA n. PCBs: If Yes, provide concentrations NA (actual & source) in composition table	oncentrations	□ Yes	∐ % ⊠	NA
□ > 2 or < 12.5	.5							SFR 761.62)?	□ Yes	N X	NA [
b. Flash Point:	W N	Method:	-	i. Pyrophoric (Water Reactive)	Reactive)	☐ Yes 図 No ☐ NA	VA o. Sulfide ≥ 500 mg/kg		□ Yes		NA
c. Total susper	c. Iotal suspended solids <1%		j. Flammable Solid	ble Solid		☐ Yes 図 No ☐ NA	VA p. Cyanide ≥ 250 mg/kg		□Yes	∪ % ⊠	NA
d. Is total orga	d. Is total organic carbon <1%		\neg				q. Oxidizer		_ yes [IJ oN ⊠	NA 🗆
e. ruming Acia/Acia Gases	WACID Gases	Li Yes Li No 🔀 NA		 k. Free liquids: If Yes, quantity volume % 	, quantity	Ves ⊠ № □ NA	VA r. Treatment Residue		□ Yes	IJ 8 ⊠	AN N
f. Pyrophoric (Air Reactive)	Air Reactive)	☐ Yes ☐ No 図 NA		I. RCRA Debris (>60 mm) (> 50% by visual inspection) or	mm) ection) or	☐ Yes ☐ No ☐ NA	NA s. Explosive		yes	U № 🛛	¥N □
		- 1	non-RCRA Rubble	Rubble	6	☐ Yes ☒ No ☐ NA	4A t. Radioactive		⊠ Yes [□ % □	NA
g. Water Reactive	tive	☐ Yes ☐ No 図 NA m. Pyrophoric (Air Reactive)	m. Pyroph	oric (Air Re	active)	☐ Yes ☑ No ☐ NA	NA u. Halogens (Cl, F, Br)		Nes [No □ NA	NA

Waste Stream Name:

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF) NORKING COPY ON CFA-04 Pond Material Profile Number: 37470 MLLW Soils from CFA-04 Pond

9. Waste Composition: (Must total 100%). Attachment Included: CAS No. Analysis	cAS No.	s 🖾 No Analysis	□ NA (if constituent	Range is <1%, use n	□ NA Range (If constituent is <1%, use mg/kg or mg/L,	Used as a		a secondario
		÷ 3	From	To .	Units			
		ă	100	100	%	z		
10. Radioisotopes: Are radioisotopes present? X Yes, If Yes, refer to attachment	If Yes, refer to	attachmer	It No, If N	lo, include sig	No, If No, include signed form 435.02	N N		
SECTION II: PROBABLE WASTE TYPE: (Completed by the Facility Representative and used to assign waste technical specialist and for appropriate management until final waste determination is made.)	the Facility Re	presentati	re and used to	assign waste	technical spec	ialist and for	r appropriate manage	ement until final waste
of the process a	waste type in	dicated is (check ail that a	apply):				
☐ Hazardous Only	Ļ.	☐ Radioactive Only	live Only		Conditional Industrial	Industrial		Il Used Oil
☐ Lab Pack ☐ Lab Pack	_] Non-con	Non-conditional Industrial	ial	□ TSCA	Other	☐ Other – Describe:	
Recyclable: □ Non Radioactive Lead (>99+% Lead)		Itteries 🗆	□ Lead Batteries □ Silver □ RCRA Scrap metal □ Other - Describe:	CRA Scrap m	etal 🗌 Other	- Describe:		
Indicated Waste Codes: D009			CERTIFICATION	No				
ı certify that the information in Section I of this form and the applicable att. Willful or deliberate omissions have not been made, and all known and su on information provided, has assigned a probable waste type in Section II	e applicable at I known and s pe in Section	Itachments suspected I	are fully disclo	sed. A good to the best of	faith effort has my knowledge, i	been put for been identif	rward to acquire and fied. The WGS Facil	of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the information. been made, and all known and suspected hazards have, to the best of my knowledge, been identified. The WGS Facility Representative, based toobable waste type in Section II.
Deborah W. Wagoner		×	though	3	which W. Wagour	J		4/22/2002
Generator Name Typed/Printed			(.	700	Signature			Date
Robert A. Lopez			X	グ米グ	1			4/23/2002
WGS Facility Representative Name Typed/Printed				WG	S Facility Peries Signature	esentative		Date

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SECTION III WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist)	Specialist)
A. Waste Determination	
1. Is this a solid waste (per 40 CFR 261.2)? Ves DNo (II No, attach regulatory citation)	
2. Is this a Hazardous Waste (per 40 CFR 261.3)? 🗹 Yes 🔲 No	
3. Is waste excluded from regulation under 40 CFR 261.4? Tyes 🗹 No 1f Yes, Regulatory cita	tion:
4. is waste subject to 40 CFR 268 regulations? Tyes IN the Waste at Waste Water or IN Non Wastewater. Is there a specified method of treatment? Tyes In the specified method: Alforn five (IN the final State)	Mater or 12 Non Wastewater.
5. Is waste listed in Subpart D of 40 CPR 261? ☐ Yes [☑ No. (If Yes, provide waste codes, regula Attachment Included: ☐ Yes ☑ No. Codes:	
6. Is waste characteristic per Subpari C of 40 CFR 261? ☐ Yes ☐ No (if Yes, provide waste c Attachment Included: ☐ Yes ☐ No Codes:	□ No (If Yes, provide waste codes, regulatory subcategory, and an explanation of determination.)
7. If hazardous, is the waste excluded for recycling in accordance with 40 CFR 261.2(e)(1)?	es 📝 No If Yes, regulatory Citation:
8. is the waste mixed or low level? S Yes No (If Yes, include attachment with isotopic information.)	mation.)
9. Is waste TSCA regulated for either of the following? PCBs: ☐ Yes ☑ No Asbestos: ☐ Yes	Yes 🕶 No
B. Evaluation of Underlying Hazardous Constituents (UHCs)	
Does the waste require evaluation in accordance with 40 CFR 268.48? 🗹 Yes 🗌 No. (If Yes, identify UHCs.). UHCs.	dentify UHCs.) UHCs: Attachment Included:
Noke Identity	9
3. Disposition and Data Gap Evaluation: (Attachment Included: ☐ Yes ☑No)	and the second s
1. Proposed Disposition (storage, treatment, disposal pathway): Treatment and disposal of ICAF	STP ID (mixed only): The CERCUA - MIL)
2. Will this waste be treated in a <90 storage area? Tyes [YNo (If Yes, attach plan.) (Mixed and Hazardous Only)	d Hazardous Only)
3. Is the information provided adequate for complete waste determination, management, transportation, treatment, and disposal of waste? 🛮 Yes 🗌 No. If No. identify additional information or analysis required.	tion, treatment, and disposal of waste? If Yes I No. If No. Identify additional
יייסייומיסיו טי מומאלינוס וכקמוופת.	
D. Verification requirements: (Attachments Included: 📋 Yes 🖃 No)	
1. Will verification be performed on this waste? Yes No If Yes, describe the verification to be performed	e performed.
,	
At Initial Storage Location: 口Yes I子No	Immediately Prior to Shipment: ☐ Yes [☑/No
2. What is the verification frequency? Λ/R	

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF) WORKING COPY ONLY

E. Packaging and Transportation	Requirements (to be complet	E. Packaging and Transportation Requirements (to be completed by P&T): Complete this section only if wastes are to be transported.	y if wastes are to be transported	
1. Is waste a DOT Regulated Hazardous Material? 🗹 Yes 🗌 No 🔝 Yes:	lous Material? 🗹 Yes 🛚 No	If Yes: DOT Primary Hazard:	DOT Subsidiary Hazard:	ary Hazard:
2. Recommended Packaging:				
3. Probable Basic Description (PSN, Hazard Class, DOT ID #, PG);	Hazard Class, DOT ID #, PG);			
4. Other information (special shipping conditions, etc.):	g conditions, etc.):			
5. If containers are already generated, are	d, are they packaged correctly t	they packaged correctly for the DOT hazard class? Yes No	☐ No If No, list container required.	
			- Angles	
Packaging & Transportation Name Typed/Printed	ransportation ed/Printed		Packaging & Transportation Signature	Date
Summary of Waste Determination:	☐ Hazardous (see codes listed above)	Z/Mixed Low-Level (see codes listed above)	Conditional Industrial	Other (describe)
		CERTIFICATIONS		
I certify that the information in Section information. Willful or deliberate omit	n III of this form and the applica ssions have not been made, ar	I certify that the information in Section III of this form and the applicable attachments are fully disclosed and accurate. A good faith effort has been put forward to acquire and verity the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified.	ccurate. A good faith effort has be b, to the best of my knowledge, bee	sen put forward to acquire and verify the in identified.
(Marluss). L	66	Maxim 1	7	Hastor
WGS Technical Specialist N Typed/Printed	Specialist Name Printed		WGS Technical Specialist Signature	Date
Mark & Marchant	hant	- Connect		809-9
WGS Independen Typed/∤	it Reviewer Name Printed	M	WGS Independent Reviewer Signature	Date
Low Level Waste Hazardous Waste Determination Review Name Typed/Printed	us Waste Determination Review Name yped/Printed	Low Level Waste	Low Level Waste Hazardous Waste Determination Review Signature	iew Date

Additional Narrative Information (As Needed):

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INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF)

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Material Profile Number: 3746Q

Charge #:

General Instructions:

LLW Soils from CFA-04 Pond Waste Stream Name:

WDDF Number (Optional):

Waste Stream Contacts

2. Process and Waste Description: (Attachment Included: 🔲 Yes 🗵 No)
Soils generated from the remediation of CFA-04 pond. These soils are from zones 5, 6, 7, and 8 excluding the zones 6a and 7a. These soils exceed the final remediation goal of 8.4 mg/kg but do not exceed the tcip level of 0.2 mg/L. The soils also contain trace amounts of radionuclides rendering the soils as LLW. No Na ☐ Yes ⊠ No ☐ NA ☐ Yes ⊠ No ☐ NA 6-9983 | 9049 | 4142 8101 ☐ Yes ☐ No ☐ NA ☐ Yes 図 No ☐ NA Phone Pager MS M No INA 7 Yes ⊠ No □ NA N Yes □ No □ NA Secondary Multi-Layered 3. Waste Characteristics: Note: The waste characteristics may not be known at time of initial determination. If required for treatment or characterization, those parameters will be dentified at a later date. 5095 Yes Yes 6-1562 □ Yes Type/size: ☐ On-going Gas Cylinder marchamy n. PCBs: If Yes, provide concentrations PCBs Bulk Product? (40 CFR 761.62)? E-Mail (actual & source) in composition table leecd One Time Only o. Sulfide > 500 mg/kg p. Cyanide > 250 mg/kg ☐ Aerosol u. Halogens (CI, F, Br) . Treatment Residue If applicable: Container #: SECTION I: PROCESS KNOWLEDGE EVALUATION (Completed by the generator with assistance from the Facility Representative) . Radioactive s. Explosive Mark V. Marchant q. Oxidizer Charlyss D. Lee Bludge □ Were any waste minimization activities a part of this process: ⊠ Yes ☐ No (if Yes, provide description or reference.) Sitewide waste minimization plan Name ☐ Yes ⋈ No ☐ NA ☐ Yes ⋈ No ☐ NA 8 N N N N N N N ☐ Yes ☒ No ☐ NA ☐ Yes ☒ No ☐ NA N No □ NA ☐ Yes ⊠ No ☐ NA Aqueous Liquid Technical Specialist: Area: WAG-4 Sources used for process evaluation (e.g. MSDS, operational logs, procedures, analyses): analytical √es □ √es Independent Contact: Organic Liquid Solids volume %
1. RCRA Debris (>60 mm)
(≥ 50% by visual inspection) or 3950 . Pyrophoric (Water Reactive) k. Free liquids: If Yes, quantity 4142 ŝ m. Pyrophoric (Air Reactive) ☐ Routine operations Phone Pager 6-8008 6403 6-9989 7699 Building/Room: N/A h. Asbestos: If yes, is it friable? . Flammable Solid Solid Е-Мајі wigg 7 c. Total suspended solids <1% ☐ Yes ☐ No ☒ NA No ⊠ NA W NA □ Existing ☐ Yes ☐ No 図 NA No ⊠ NA No ⊠ NA 6. Physical Description (check all that apply): Color: 1. Waste Generation Location: Facility: CFA Exact Method: □ Yes □ Yes □ Yes Anticipated Other generation information; N/A Deborah W. Wagoner Liquids Facility Rep.: Robert A. Lopez Is total organic carbon <1% e. Furning Acid/Acid Gases Pyrophoric (Air Reactive) 4. Generation Status: a. pH (aqueous only): □ < 2 □ ≥ 12.5 □ > 2 or < 12.5 Name Water Reactive Flash Point: Generator: Contact:

INEEL WASTE DETERMINATION & DISPOSITION FORM (WDDF) WORKING COPY Material Profile Number ONLSY

Waste Stream Name: LLW	LLW Soils from CFA-04 Pond	4 Pond				M	aterial Prof	Material Profile Number.	
9. Waste Composition: (Must total 100%). Attachment Included:	100%). Attachment li	ncluded: 🛮 Y	es 🛭 No	NA □		ļ			
Constituent		CAS No.	Analysis or PK		Range is <1%, use n rwise report i	Hange (If constituent is <1%, use mg/kg or mg/L, otherwise report in %) From To Units	Used as a Solvent? (Y/N)	Comments	
soil			품	100	100	%	z		
10. Radioisotopes: Are radioisotopes pri	es present? N Yes, If Yes, refer to attachment 🔲 No, If No, include signed form 435.02	If Yes, refer to	o attachme	No, #N	lo, include sig	ned form 435.0	2		
SECTION II: PROBABLE WASTE I determination is made.)	TYPE: (Completed by	/ the Facility R	lepresentati	ve and used to	assign waste	technical spec	ialist and for	SECTION II: PROBABLE WASTE TYPE: (Completed by the Facility Representative and used to assign waste technical specialist and for appropriate management until final waste determination is made.)	waste
Based on evaluation of the process and	and available data the waste type indicated is (check all that apply);	e waste type ir	ndicated is (check all that a	apply):				
☐ Hazardous Only	☐ Mixed		M Radioactive Only	tive Only		Conditional Industrial	Industrial	io bed Oil	jiO pi
☐ Material Exchange	☐ Lab Pack		☐ Non-cor	☐ Non-conditional Industrial	rial	□ TSCA	Other	Other – Describe:	
☐ Recyclable: ☐ Non Radioactive Lead (>99+ % Lead)	ve Lead (>99+ % Lead		atteries 🗌	Silver 🗌 R	CRA Scrap m	Lead Batteries Silver SINer RCRA Scrap metal Other - Describe:	- Describe:	and a second sec	
Indicated Waste Codes: N/A							:		
, certify that the information in Section I o Willful or deliberate omissions have not t on information provided, has assigned a	ion i of this form and the applicable atta s not been made, and all known and su- hed a probable waste type in Section II.	ne applicable a all known and ype in Section	attachments suspected i	CERTIFICATION are fully disclosed	ON sed. A good to the best of	faith effort has my knowledge,	been put for been idenlif	certify that the information in Section I of this form and the applicable attachments are fully disclosed. A good faith effort has been put forward to acquire and verify the information. Willful or deliberate omissions have not been made, and all known and suspected hazards have, to the best of my knowledge, been identified. The WGS Facility Representative, based on information provided, has assigned a probable waste type in Section II.	ation.
Deborah V	Deborah W. Wagoner		1	7	(h) (1 Jacons	ı	12/1	622
Genera Typed	Generator Name Typed/Printed					Signature		Da	Date
Robert	Robert A. Lopez			14	2			4/23/2003	2002
WGS Facility Rej Typed	WGS Facility Representative Name Typed/Printed					S Facility Representative Signature	entative	Da	ate
)				

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3. is the information provided adequate for complete waste determination, management, transportation, treatment, and disposal of waste? 日子es 🗋 No. If No. identify additional information or analysis required. Attachment included: Thes INO is waste characteristic per Subpart C of 40 CFR 261? 📋 Yes 📅 No (If Yes, provide waste codes, regulatory subcategory, and an explanation of determination.) Attachment included: 🔲 Yes 🖪 No Codes: 4. Is waste subject to 40 CFR 268 regulations? ☐ Yes ☑ No If Yes, is the waste a: ☐ Waste Water or ☐ Non Wastewater.
Is there a specified method of treatment? ☐ Yes ☐ No If Yes, list the specified method:
5. Is waste listed in Subpart D of 40 CFR 261? ☐ Yes ☑ No (If Yes, provide waste codes, regulated hazardous constituent(s), and an explanation of determination.)
Attachment Included: ☐ Yes ☑ No Codes. Ž STP ID (mixed only): Immediately Prior to Shipment:

Yes \$ 7. If hazardous, is the waste excluded for recycling in accordance with 40 CFR 261.2(e)(1)? 🔲 Yes 🗒 No If Yes, regulatory Citation: Does the waste require evaluation in accordance with 40 CFR 268.48? Tyes of No (If Yes, identify UHCs.) UHCs: 2. Will this waste be treated in a <90 storage area? Tyes Id No (If Yes, attach plan.) (Mixed and Hazardous Only) Asbestos: 🗌 Yes 📝 No . Will verification be performed on this waste? Tyes TNo If Yes, describe the verification to be performed. SECTION III WASTE DETERMINATION AND DISPOSITION (Completed by the WGS Technical Specialist) 3. Is waste excluded from regulation under 40 CFR 261.4? Tyes Wolve If Yes, Regulatory citation: 1. Is this a solid waste (per 40 CFR 261.2)? [7] Yes \(\Box \text{INO, attach regulatory citation} \) Disposition and Data Gap Evaluation: (Attachment Included: 🗌 Yes 💋 No) p 9. Is waste TSCA regulated for either of the following? PCBs: TYes TVNo 1. Proposed Disposition (storage, treatment, disposal pathway): Disposal D. Verification requirements: (Attachments Included: 🔲 Yes 📝 No) on P 2. Is this a Hazardous Waste (per 40 CFR 261.3)? Tyes 📝 No B. Evaluation of Underlying Hazardous Constituents (UHCs) ∏ Yes At Initial Storage Location: 2. What is the verification frequency? NA A. Waste Determination

Attachment B2 Summary of CFA-04 Prefinal Inspection

Attachment B2

Summary of CFA-04 Prefinal Inspection

October 16, 2003, 2 PM

Wayne Pierre	EPA	Ted Livieratos	DEQ
Mark Shaw	DOE	Doug Jorgensen	BBWI
Scott Reno	BBWI	Deborah Wagoner	BBWI
John Giles	BBWI		

Action Items:

- 1. BBWI will provide survey results on area in Zone 6 near Sampling Point 6-3. EPA did not believe that the excavated area is 10 ft deep or at basalt. EPA said that this is a quality assurance check on how the excavation went.
- 2. BBWI will email photos to EPA and DEQ that were taken during the inspection.
- 3. BBWI will provide a printout of the last calibration of the field Atomic Absorption (AA) instrument.

The above participants walked the excavated CFA-04 mercury pond after mercury-contaminated soil and asbestos-containing material were removed per the RD/RA Work Plan^a. Eleven pictures were taken during the inspection, and one picture of the AA that was taken yesterday can be used for the record of the inspection.

EPA said that the response to the action items would complete the prefinal inspection.

Questions were answered as follows:

- BBWI explained that samples were taken below the pipe and inside the pipe.
- BBWI explained that the last asbestos was removed from the southwest corner of the pond today (10-16-03).
- BBWI explained that the orange on the sidewall marked where a sample had been taken to determine the lateral extent of the contamination.
- BBWI said that a suitability determination was in the files for the asbestos that was disposed of at the CFA Landfills in response to EPA's question.
- BBWI pointed out that the south side of the pond was excavated and hauled to the CFA Landfills because it was nonradioactive. The north side soil was slightly radioactive and was hauled to the ICDF. This was in response to DEQ's questions.

a. DOE-ID, 2003, Waste Area Group 4 Remedial Design/Remedial Action Work Plan, CFA-04 Pond Mercury-Contaminated Soils, Operable Unit 4-13, DOE/ID-11028, Rev. 0, February 2003.

- BBWI explained that turnaround on sample analysis was very quick. EPA pointed out that the field samples were opportunity-biased samples, not random samples. BBWI indicated that the QC samples were taken randomly per the procedure in the Field Sampling Plan.^b
- BBWI pointed out that the effluent line came from Building CFA-674, located across the parking lot to the north.
- BBWI explained that laboratory safety is covered by a Job Safety Analysis. Calibration of the field AA is done daily, and analysis was done per the procedures in the instrument operating manual.
- BBWI explained that there was no maintenance log and that the AA was sent to the manufacturer for cleaning prior to use on the CFA-04 remedial action.

b. DOE-ID, 2003, *Field Sampling Plan for the Central Facilities Area-04 Pond Remedial Action*, DOE/ID-11024, Rev. 0, February 2003.

Attachment B3

Responses to EPA/DEQ Requests for Information during the Prefinal Inspection

Attachment B3.1 Logbook Entry

	85
	10/6/03 Cont.
17.38	Loading Tunk 3440/3455, ICOF04020375.
12:52	40 November 325 Indel South to be 00
	-1/2 load bat @ zone & moring to NW area of soic 8 to
	-1/2 load blig zon 8, moring to NW and of soic 8 to remove Soil to basalt Rallin than make rook, will have ul loade
	to South of Rece 7 for roading
13:11	Losolin Twill 3441 Can 3446, ICOFO4030376 Using loader : excavater.
	Localing Twill 3441 Kan 3446 , ICOFO4030376 Using loader : extraorder . Excavator is cleaning material down to rock i I along lande Explains
	loading Tuck.
1:36	JCDFC+1030376 lacked: sent for taping.
	Continuing to load using lader/ counter, landing Twell Triplean
	3447/ TEDF0460 37/
4:02	Cooding Trud 3440/3415 ICDF04030578
4:15	TCDF04030377:378 loaded: sut & lemping.
4:29	Note Completed all of zone 8, 7, walking in two
	Water Campleted all of zone 8, 7, walking in two
	Smallaras in a Awaiting continuation sampling in
	House ares. Commend soil to basult in 11 : Small anough him back of suc
4:45	JCDF04030379 loaded but for tapy to moved soil to basult in 6-3.
	- Moring to routh of zery 5. will semon 2.3' on nath
	barreley. Howard Small awould her saight ava 6-2 lossingle.
	- Mixing Soil Wwater in some 5 north brading
:15	Loading Tuck 3442/can 3447 FCDFO4030 380
<u> </u>	
	-Trucks loaded to start: 13
3°20	- Water buck is empty, waiting for it to return
47	FCDF-01030300 loaded gent la taiping.
49	Loady Truck 3440/can 3465, ICDF04030381
:55	ICDF04030 38) Madad. Sent (a taping
58	Coodin two 3441/can 3446, ICOPO400382.
:05	ICDF04830382 (pockets Sent for favoring
	the Total loads seat to ICOF, I assest books
	awaiting transport 310 Tons Landez

Attachment B3.2 Prefinal Inspection Pictures



Figure B3.2-1. Looking west at profile of asbestos material adjacent to Zone 8.

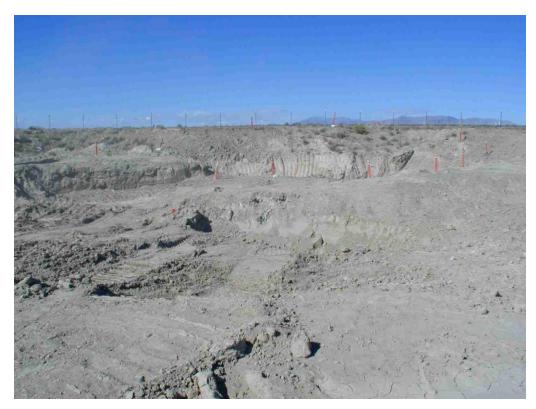


Figure B3.2-2. Looking northwest at Zone 8.



Figure B3.2-3. Looking east across basalt dome in Zone 7.

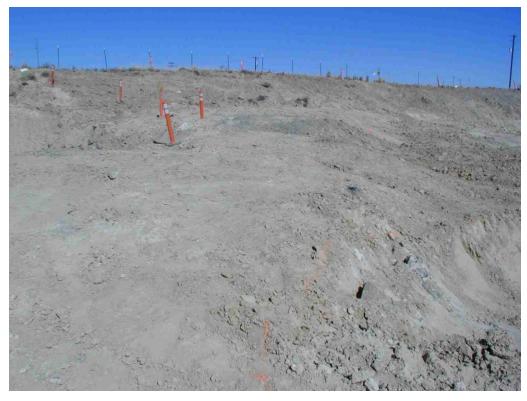


Figure B3.2-4. Looking east along basalt ridge in Zone 8.



Figure B3.2-5. Exposed basalt on top of dome in Zone 7.



Figure B3.2-6. Looking east from Zone 7 across Zone 6.



Figure B3.2-7. Exposed basalt profile on north boundary of Zone 6.



Figure B3.2-8. Looking north along Zone 5 with building CF-674 in background.



Figure B3.2-9. Piece of clay inlet pipe with gray residue.



Figure B3.2-10. Looking from Zone 11 into Zones 13 and 14.



Figure B3.2-11. Looking northeast at basalt ridge and rubble in Zones 13 and 14.



Figure B3.2-12. Looking northwest at pond inlet with building CF-674 in background.



Figure B3.2-13. Building CF-674 with road and parking area in foreground.



Figure B3.2-14. Asbestos material removal in area adjacent to Zone 8.

Attachment B3.3 Field Analyzer Calibration

Attachment B3.3

Field Analyzer Calibration

No	Description	M, mg	Mass Hg, mg	C, mg/kg	Area	Maximum	Time
3	Std6.25	61	0.000381250	6.8	156000	15500	1:18:11 PM
4	Std6.25	27	0.000168750	5.5	56400	10300	1:21:59 PM
5	Std6.25	172	0.001075000	6.1	396000	37600	1:25:40 PM
6	Std6.25	98	0.000612500	6.5	242000	32900	1:30:49 PM

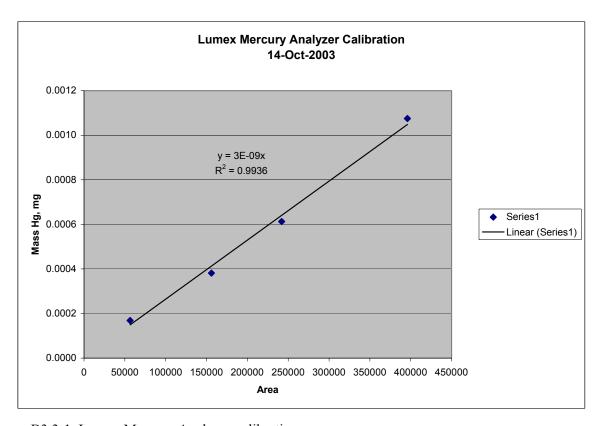


Figure B3.3-1. Lumex Mercury Analyzer calibration.

Attachment B4 Pictures of Sample Point 6-3 Excavation

Attachment B4.1 Pictures of Sample Point 6-3 Prior to Excavation

Attachment B4.1

Pictures of Sample Point 6-3 Prior to Excavation







Attachment B4.2 Pictures of Sample Point 6-3 After Excavation

Attachment B4.2

Pictures of Sample Point 6-3 After Excavation













